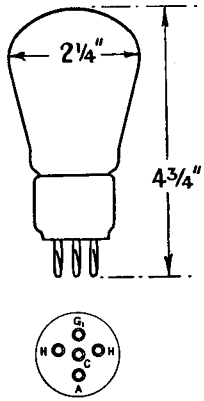
—Standard Valves—

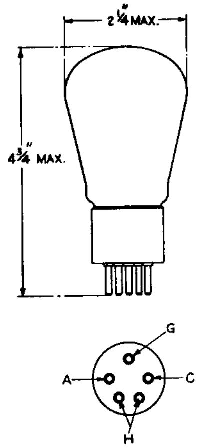
4033-A, -AA AND -AF VALVES

TRIODES.

The 4033-AF valve is identical with the 4033-A valve ; the -F code indicates that the valve has passed special tests for use in Standard Aircraft radio.



4033-A and -AF



4033-AA

SPECIFICATION.

Cathode.

Indirectly heated oxide coated.

Constant voltage type.

Base.

4033-A and -AF Standard British 5-pin.

4033-AA American Medium 5-pin.

Dimensions.

Overall length	4¾" (12 cms.)
Maximum diameter	2¼" (5·8 cms.)
Net weight	0·14 lbs. (65 gms.)

Constants.

Heater voltage	6 volts
Nominal heater current	1·4 amps.
*Impedance	1,670 ohms
*Amplification factor	15
*Mutual conductance	9 mA per volt
Grid–anode capacity	8 $\mu\mu$F.
Anode–filament capacity	2·7 $\mu\mu$F.
Grid–filament capacity	11·9 $\mu\mu$F.

* at Vp = 300 *volts*, Ip = 50 *mA*.

LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	600 volts
Maximum direct anode current	0·170 amps.
Maximum anode dissipation	25 watts
Maximum direct grid current	0·030 amps.
Maximum frequency for above ratings	2 Mc.
Maximum anode voltage for frequency of 10 Mc.	500 volts

—Standard Valves—

TYPICAL OPERATING CONDITIONS.

	Class A A.F. Amp.
Direct anode voltage	400 volts
Grid bias	(approx.) —20 volts
Direct anode current	0·050 amps.
Anode dissipation	16 watts
Load impedance	7,000 ohms
Undistorted output	4 watts

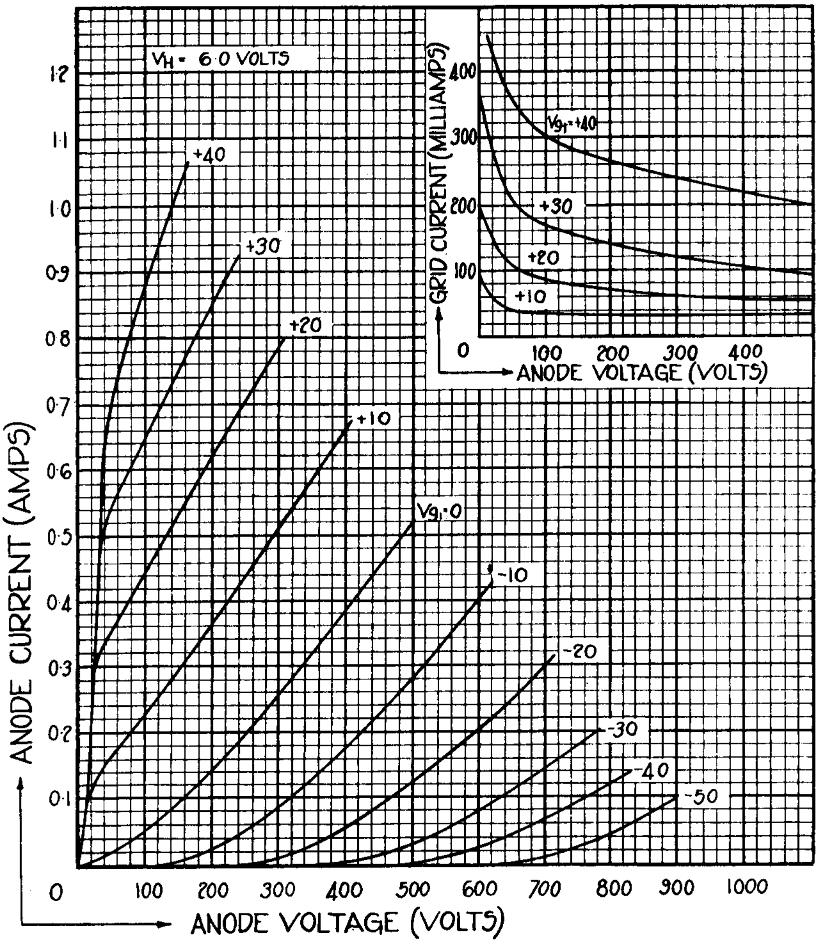
	Class B A.F. Amp. and Mod. For balanced 2 valve circuit
Direct anode voltage	600 volts
Grid bias	—30 to —40 volts (individual biasing required for each valve)
Anode current per valve—zero signal	20 mA
Anode current per valve—maximum signal	80 mA
Anode dissipation	23 watts
Load resistance—anode to anode	7,200 ohms
Peak AF grid to grid voltage	130 volts
Grid current per valve	8 mA
Maximum output—2 valves	50 watts

RADIO FREQUENCY OPERATION.

	Class B Telephony	Class C Telephony	Class C Telegraphy
	Modulated carrier applied to grid	Subject to anode modulation	Unmodulated
Direct anode voltage	600	400	600 volts
Direct anode current	0·063	0·094	0·09 amps.
Grid bias	—45	—70	—100 to —150 volts
Anode dissipation	25	12·5	18 watts
Carrier output	12·5	25	36 watts

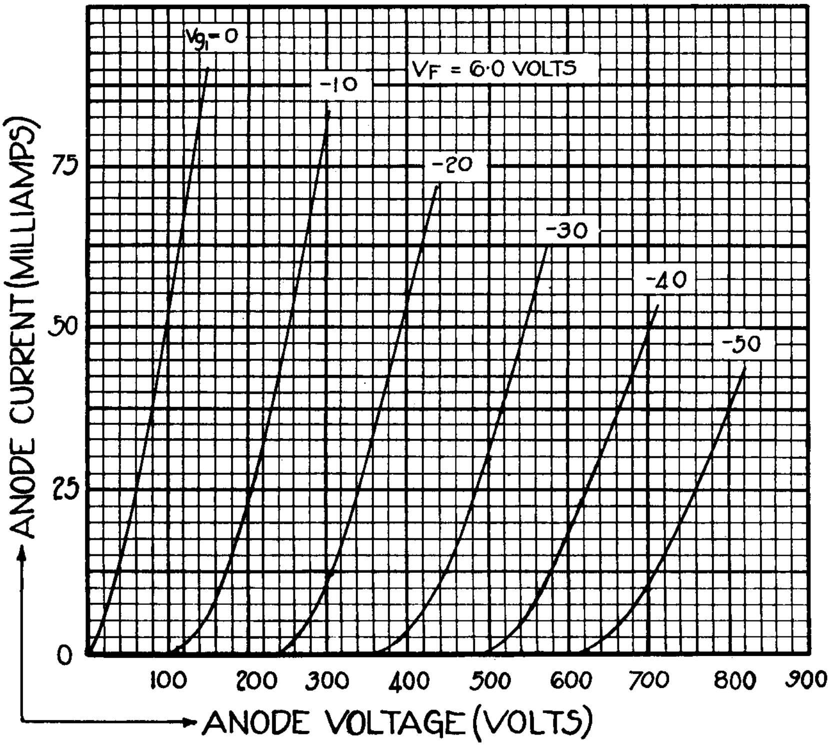
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—Standard Valves—



4033-A Valve
-AA Valve
-AF Valve

—Standard Valves—



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